

## Material Safety Data Sheet



### Nanodiamond in PLA

Date: 28.3.2018

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## **1. PRODUCT AND COMPANY INFORMATION**

Product Name: Nanodiamond in PLA

Product Description: Nanodiamond Powder in Polylactic Acid (ND <1 wt. %)

### RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Identified uses: Laboratory chemicals, Manufacture of substances

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## **2. HAZARDS IDENTIFICATION**

### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### LABEL ELEMENTS

The product does not need to be labelled in accordance with EC directives or respective national laws.

#### OTHER HAZARDS

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1 % or higher.

### **3. COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Name</b>	<b>CAS-No.</b>	<b>Classification</b>	<b>Conc.</b>
Nanodiamond	7782-40-3	Not hazardous	<1 %
PLA (Polylactic acid)	26100-51-6	Not hazardous	>99 %

### **4. FIRST AID MEASURES**

#### IF INHALED

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### IN CASE OF SKIN CONTACT

Wash off with soap and plenty of water.

#### IN CASE OF EYE CONTACT

Flush eyes with water as a precaution.

#### IF SWALLOWED

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### **5. FIRE-FIGHTING MEASURES**

#### SUITABLE EXTINGUISHING MEDIA

Use water-spray, alcohol-resistant foam, dry chemical powder or carbon dioxide.

#### SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

No data available.

#### ADVICE FOR FIRE-FIGHTERS

Wear self-contained breathing apparatus for firefighting if necessary.

#### FURTHER INFORMATION

No data available.

## **6. ACCIDENTAL RELEASE MEASURES**

### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Avoid dust formation. Avoid breathing vapours, mist or gas.

### ENVIRONMENTAL PRECAUTIONS

No special environmental precautions required.

### METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Sweep up and shovel. Keep in suitable, closed containers for disposal.

## **7. HANDLING AND STORAGE**

### PRECAUTIONS FOR SAFE HANDLING

Provide appropriate exhaust ventilation at places where dust is formed.

### CONDITIONS FOR SAFE STORAGE

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. Moisture sensitive.

Storage class (TRGS 510): Non Combustible Solids

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### APPROPRIATE ENGINEERING CONTROLS

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

### PERSONAL PROTECTIVE EQUIPMENT

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: No special environmental precautions required.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### Appearance

Form:	Solid
Odour:	No data available
pH	No data available
Melting point/ freezing point	175 – 220 °C
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature	No data available
Decomposition temp.	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

Other safety information

No data available

## **10. STABILITY AND REACTIVITY**

### REACTIVITY

No data available.

### CHEMICAL STABILITY

Stable under recommended storage conditions.

### POSSIBILITY OF HAZARDOUS REACTIONS

No data available

### CONDITIONS TO AVOID

No data available

### INCOMPATIBLE MATERIALS

Strong oxidizing agents

### HAZARDOUS DECOMPOSITION PRODUCTS

Other decomposition products - No data available.

## **11. TOXICOLOGICAL INFORMATION**

### ACUTE TOXICITY

No data available

### SKIN CORROSION/IRRITATION

No data available

### SERIOUS EYE DAMAGE / EYE IRRITATION

No data available

### RESPIRATORY OR SKIN SENSITISATION

No data available

### GERM CELL MUTAGENITY

No data available.

#### CARCINOGENICITY

IARC: No component of this product present at levels greater than or equal to 0.1 % is identified as probable, possible or confirmed human carcinogen by IARC.

#### REPRODUCTIVE TOXICITY

No data available

#### SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE

No data available

#### SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE

No data available

#### ASPIRATION HAZARD

No data available

#### ADDITIONAL INFORMATION

RTECS: Not available

## **12. ECOLOGICAL INFORMATION**

#### TOXICITY

No data available

#### PERSISTENCE AND DEGRADABILITY

No data available

#### BIOACCUMULATIVE POTENTIAL

No data available

#### MOBILITY IN SOIL

No data available

#### RESULTS OF PBT AND vPvB ASSESSMENT

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1 % or higher.

#### OTHER ADVERSE EFFECTS

No data available

## **13. DISPOSAL CONSIDERATIONS**

### WASTE TREATMENT METHODS

#### PRODUCT

Offer surplus and non-recyclable solutions to a licenced disposal company.

#### CONTAMINATED PACKAGING

Dispose of as unused product.

## **14. TRANSPORT INFORMATION**

#### UN NUMBER

ADR/RID: -

IMDG: -

IATA: -

#### UN PROPER SHIPPING NAME

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

#### TRANSPORT HAZARD CLASS(ES)

ADR/RID: -

IMDG: -

IATA: -

#### PACKAGING GROUP

ADR/RID: -

IMDG: -

IATA: -

#### ENVIRONMENTAL HAZARDS

ADR/RID: no

IMDG: Marine pollutant: no

IATA: no

#### SPECIAL PRECAUTIONS FOR USER

No data available.

## **15. REGULATORY INFORMATION**

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

CHEMICAL SAFETY ASSESSMENT

For this product a chemical safety assessment was not carried out.

## **16. OTHER INFORMATION**

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Carbodeon Ltd Oy shall not be held liable for any damage resulting from handling or from contact with the above product.